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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,249	12/20/2001	Gregory D. May	7000-209	9021
27820	7590	11/29/2005	EXAMINER	
WITHROW & TERRANOVA, P.L.L.C.			WANG, QUAN ZHEN	
P.O. BOX 1287			ART UNIT	PAPER NUMBER
CARY, NC 27512			2633	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

(X)

Office Action Summary	Application No. 10/027,249	Applicant(s) MAY ET AL.	
	Examiner Quan-Zhen Wang	Art Unit 2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,10-12,14-18 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,10-12,14-18 and 20-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "the optical system" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-7, 9-10, 12, and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al. (U.S. Patent US 5,986,782).

Regarding claim 1, Alexander teaches an method (fig. 2) of measuring optical signal power in an optical signal, comprising: receiving optical signals at a wavelength select switch (fig. 2, wavelength select device 54); coupling a received optical signal through the wavelength select switch to a power meter (fig. 2, power meter 56);

measuring a power level of the optical signal passed through the wavelength select switch using the power meter; passing a subset of the optical signals through the wavelength select switch at substantially the same time; measuring power in the subset of optical signals using the power meter (column 4, lines 22-60). The system of Alexander differs from the claimed invention in that Alexander does not specifically teach displaying an indication of the optical signal power in the optical signal on a monitor to a system administrator. However, Alexander further teaches a local alarm indicator (fig. 2, local alarm 59). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include a monitor in the local alarm indicator to display an indication of the optical signal power in order to provide an alarm signal to indicate the status of the system.

Regarding claim 12, Alexander teaches an apparatus (fig. 2) for measuring optical signal power in an optical system (fig. 1), comprising: a wavelength selective switch (fig. 2, wavelength selective device 54) having output ports (fig. 2, output from 54) to selectively pass a received optical signal (fig. 2, signal input from 52) to one of the output ports wherein the wavelength select switch passes a subset of the optical signals to the one of the output ports at the same time and a power meter (fig. 2, power meter 56) measures power in the subset of the optical signals; and the power meter which receives an optical signal from an output port and measures the power in the optical signal (column 3, lines 55-67 and column 4, lines 1-60). The system of Alexander differs from the claimed invention in that Alexander does not specifically teach displaying an indication of the optical signal power in the optical signal on a

monitor to a system administrator. However, Alexander further teaches a local alarm indicator (fig. 2, local alarm 59). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include a monitor in the local alarm indicator to display an indication of the optical signal power in order to provide an alarm signal to indicate the status of the system.

Regarding claims 3 and 14, Alexander further teaches that the optical signals comprise different wavelengths of optical energy (fig. 2, λ_1 - λ_n).

Regarding claims 4 and 15, Alexander teaches diverting a portion of optical energy (fig. 2, tap 42) on an optical medium to obtain the optical signals.

Regarding claims 5 and 16, Alexander further teaches using a power splitter (optical tap) (fig. 2, tap 42) to divert a portion of the signal power from an incident signal.

Regarding claim 6, as it is understood in view of the above 112 problem, and claim 17, Alexander differs from the claimed invention in that Alexander does not specifically teach that the system comprises a DWDM system. However, Alexander explicitly teaches that his invention is for a WDM system (abstract). Any one of ordinary skill in the art at the time when the invention was made would understand that the WDM of Alexander reads the claimed DWDM. In addition, the claimed limitation does not result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. Therefore, the prior art reads the claimed invention.

Regarding claims 7 and 18, Alexander further teaches successively direct other ones of the optical signal through the wavelength select switch to the power meter and measuring in the other optical signals using the power meter (column 4, lines 22-29).

Regarding claim 9, Alexander further teaches to display an indication of the power in the optical signal (fig. 3).

Regarding claim 10, Alexander further teaches to determine if the power in the optical signal has crossed a predetermined threshold and trigger an alarm (fig. 2, local alarm 59) if the power in the optical signal has crossed the predetermined threshold.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al. (U.S. Patent US 5,986,782) in view of Sugaya (U.S. Patent US 6,873,795 B1).

Regarding claim 11, Alexander differs from the claimed invention in that Alexander does not specifically teach controlling an optical amplifier in accordance with the power of the optical signal to regulate optical power of the optical signals on the transmission medium. However, Alexander further teaches that the system comprises optical amplifiers (fig. 1, AMP 40), and it is well known in the art to regulate an optical amplifier using signals tapped off at the output of the optical amplifier. For example, Sugaya discloses to regulate an optical amplifier by the signals tapped near the output of the amplifier (figs. 9, 11, and 18). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate the

amplifier regulation circuitry taught by Sugaya into the system of Alexander in order to control the gain of the optical amplifier (fig. 1, AMP 40).

6. Claims 20-21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugaya (U.S. Patent US 6,873,795 B1) in view of Alexander et al. (U.S. Patent US 5,986,782).

Regarding claim 20, Sugaya discloses an optical system (fig. 9) comprising: an optical medium (fig. 9, optical fiber 21 and amplifying fiber 28) which carries different wavelengths of optical energy (fig. 4, λ_1 - λ_5), an optical tap (fig. 9, optical tap 22) which siphons the different wavelengths of optical energy from the optical medium, a wavelength selective switch (fig. 9, the combination of element 30, and 13) having output ports, which receives siphoned wavelengths of optical energy from the optical tap and which selectively passes more than one of the siphoned wavelengths of optical energy to one of the output ports (fig. 9, the output port connecting to detector 31); a power meter (fig. 9, detector 31) which receives the more than one wavelength of optical energy from the output port and which measures power in the more than one wavelength of optical energy. Sugaya differs from the claimed invention in that Sugaya does not specifically teach displaying an indication of the optical signal power in the optical signal on a monitor to a system administrator. However, it is well known in the art to include an optional indicator to signal the system status. For example, Alexander discloses an optional local alarm indicator (fig. 2, local alarm 59). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was

made to include an optional local alarm indicator having a monitor to display an indication of the optical signal power in order to provide an alarm signal to indicate the status of the system.

Regarding claim 21, Sugaya teaches that the optical tap siphons only a portion of the wavelengths from the medium (fig. 9, optical tap 22).

Regarding claim 23, Sugaya further teaches that the system comprises an optical amplifier which regulates power for the wavelengths of optical energy one the optical medium in response to measured power in the more than one of the siphoned wavelengths (fig. 9, optical amplifying fiber 28 and the pump light source LD 29).

7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugaya (U.S. Patent US 6,873,795 B1) in view of Alexander et al. (U.S. Patent US 5,986,782) and further in view of Prohaska (U.S. Patent Application Publication US 2002/0176658 A1).

Regarding claim 22, Sugaya differs from the claimed invention in that Sugaya does not specifically teaches that the wavelength select switch passes, to another of the output ports, a wavelength that is not included in the at least one wavelength. However, it is well known in the art to use a wavelength select switch to receive a set of wavelengths, and to switch a wavelength to one output port of the wavelength switch, and to pass more than one wavelengths of the received wavelengths not including the previously switched wavelength to another output port of the switch, as it is disclosed in fig. 5 of Prohaska. Therefore, it would have been obvious for one of ordinary skill in the

Art Unit: 2633


art at the time when the invention was made to incorporate a wavelength switch, as it is disclosed in fig. 5 of Prohaska, in the modified system of Sugaya and Alexander in order to selectively switch a wavelength to one output port and passing non-selected wavelengths to other output port.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571) 272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

qzw
11/17/2005


M. R. SEDIGHIAN
PRIMARY EXAMINER